DISTRIBUTED CONTROL STRATEGY FOR DYNAMICALLY ENCODING MULTIPLE STREAMS OF VIDEO DATA IN PARALLEL FOR MULTIPLEXING ONTO A CONSTANT BIT RATE CHANNEL

Abstract of the Disclosure

A distributed control strategy is provided for dynamically encoding multiple streams of video data in parallel for multiplexing onto a constant bit rate channel. The control strategy is a single pass strategy which allows individual encode bit rates to be dynamically adjusted for each video data stream based in part on relative complexity of the multiple streams of video data, as well as fullness of compressed video data buffers coupled between the encoders and the constant bit rate channel. The control strategy includes encoding the multiple streams of video frames in parallel using multiple encoders, exchanging one or more statistics between the encode processes using an exchange interface, and dynamically adapting encoding of at least one stream of the video frames using the exchanged statistics based on relative complexity of the video frames.